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10/711,859	10/11/2004	Nitesh Ratnakar		5858

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EXAMINER

LEUBECKER, JOHN P

ART UNIT	PAPER NUMBER
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3739

MAIL DATE	DELIVERY MODE
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10/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/711,859	Applicant(s) RATNAKAR, NITESH	
	Examiner John P. Leubecker	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,10,12-16,23-39,41,43,47-50,54-57 and 61-67 is/are pending in the application.
- 4a) Of the above claim(s) 23-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,10,12-16,41,43,47-50,54-57 and 61-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Specification

1. The amendment filed July 17, 2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in paragraph [52], specifying that the electric cable is now a 'fiber optic' cable is new matter. There is no indication or evidence in the disclosure that the 'illumination bulb' has anything to do with fiber optics or that any of the electric cables connected to the illumination bulbs contain 'fiber optics'.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

2. Claims 16, 47 and 54 are objected to because of the following informalities: In claim 16, line 1, delete "rear" to be consistent with change made in claim 15 and in line 2 "ource" should be --source--. In claim 47, line 6, "proximate" should be --proximal--; In claim 54, line 7, "proximate" should be --proximal--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 43 and 67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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As to claim 1, line 3, term “insertion tube” lacks antecedent basis.

Claim 43 depends from canceled claim 40. It will be assumed that it depends from claim 1 for the purposes of applying prior art.

As to claim 67, term “the actuator” lacks antecedent basis. Term “distal end of the end of the catheter” is confusing as to what “end” being referred to. It would appear that "distal end of the catheter" was intended (and this would alleviate any confusion).

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 3, 10, 12-14, 47, 49, 54-56 and 61-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaiya (U.S. Pat. 5,178,130).

As to claims 1, 47 and 54, Kaiya discloses a shaft/endoscope (6a, Fig.2) having distal and proximal ends and defining a hollow channel therethrough (16); a first image lens (28a, Fig.1) adjacent the distal end of the insertion tube for receiving a first image in a first direction; and a catheter (endoscope 2b) receivable in the hollow channel of the shaft for extension and retraction therethrough (note Fig.2); and a rear view module/second image lens (28b) adjacent the distal end of the catheter, the second image lens movable with respect to the first image lens so as to receive a second image in a second direction. Kaiya teaches that catheter (2b) comprises a curvable section (14a, col.3, lines 40-45), as opposed to merely a flexible section (15a). The

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Examiner takes the position that this 'curvable section' will actively allow curving in a desired direction and thus allow the second direction to be at a predetermined angle to the first direction.

As to claim 3, since the first and second lenses are used simultaneously (Fig.2), they inherently receive images simultaneously.

As to claims 10, 49, 55 and 56, and as mentioned above, the Examiner takes the position that, in order to be 'curvable', each of the endoscope and catheter shafts must inherently have some kind of active mechanism to provide the curvable function. This mechanism would anticipate an 'actuator' as broadly as claimed.

As to claims 12 and 61, note imaging device (29b) and processor (32b) in Figure 1.

As to claims 13 and 62, display screens (5a,5b) constitute a display screen for displaying the first and second images. Also note col.9, line 66 to col.10, lines 4.

As to claims 14 and 63, Kaiya teach that the both endoscopes (2a,2b) can be fiberscopes with externally fitted camera (col.9, lines 61-65). As evidenced by Karasawa et al. (U.S. Pat. 5,196,928), a fiberscope with external camera (2b, Fig.5 of Karasawa et al.) includes an eyepiece (9d, Fig.5, col.5, line 63 to col.6, line 24).

7. Claims 47-50, 54-57, 61, 62 and 64-67 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoon (U.S. Pat. 6,066,090).

Yoon discloses a shaft/endoscope (12,14, Fig.1) comprising a first lens (36, Fig.2) at the distal end which can receive a first image in a forward direction (in the condition that it is not bent, note 44 Fig. 8 for example) and a catheter (18, Figs.1,2) including a rear view module/second lens (36 on 18) for simultaneously receiving a second image at a predetermined

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angle to the first direction (in the condition that it is bent, note 46 in Figure 4 for example). The catheter (18) is receivable in a hollow channel (note channel of shaft 12 that accommodates 18, Fig.1). The catheter (18) is independently steerable via an actuator up to approximately 180 degrees (note col.5, line 51 to col.6, line 34, which incorporates Shockey, U.S. Pat.5,168,864 and Hibino et al. by reference as showing a suitable steering control mechanisms; note col.2, lines 20-30 of Shockey which teaches 180 degree deflection and Figure 1, elements 10 and 13 of Hibino et al. which show multiple control wires). Any of the steering mechanisms disclosed or incorporated by reference by Yoon would anticipate a "bending structure disposed at the distal end of the catheter" that "urges the catheter into the second direction upon exit from the hollow channel". Note that all lenses operatively connect to an image processor (26) and monitor (27) (Fig.1). The rear view module can include a LED (54b) which is a "bulb" and requires a power source.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 15, 16, 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiya in view of Yoon.

Kaiya disclose the device as described above and that the illumination for both the endoscopes (2a,2b) is provided by an optical fiber waveguide (17a,17b). Thus, Kaiya fails to disclose one or more illumination bulbs disposed on the distal tip of the catheter. Yoon et al.

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discloses a similar endoscope system in which either of the endoscopes (14, 16 or 18) can include an optical wave guide for illumination but alternatively can include LEDs or incandescent bulbs located at the distal end (col.5, lines 1-12). Since both Kaiya and Yoon teach endoscope devices and illumination sources, it would have been obvious to one of ordinary skill in the art to have substituted one alternative illumination arrangement for another to achieve the predictable result of providing illumination to the field of view. One would be motivated to use an illumination bulb (e.g., LED) at the distal end to eliminate the need optical fibers to extend through the shaft, which fibers attenuate light and are capable of breaking.

Inherently, use of any electrical bulb source (i.e., LED) will require a connection to a power source.

10. Claims 41, 43, 48, 50, 57, 66 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiya in view of Torii (U.S. Pat. 6,482,149).

Kaiya discloses the device as described above but fails to provide any particulars as to the curvable sections of the endoscopes. Torii is one of many references which evidences what is known in the endoscope art. Torii teaches an actuator mechanism for bending the curving section (22, Fig.1) of an endoscope comprising first and second wires (54, Fig.2). The curving section can be bent well over 180 degrees from the longitudinal axis (Fig.19). Given the lack of disclosure as to the particulars of the curvable section in Kaiya, it would have been obvious to one of ordinary skill in this art to have turned to the prior art to "fill in the gaps" when reducing the Kaiya device to practice. Indeed, use of the known curvable section as taught by Torii for the

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curvable section of Kaiya would have been part of the ordinary capabilities of a person skilled in this art.

Use of such known curvable part would allow the angle between the first direction and second direction to be at least 180 degrees. Furthermore, with respect to claim 67, the wires (54) of Torii would anticipate a "bending structure disposed at the distal end of the catheter" that "urges the catheter into the second direction upon exit from the hollow channel".

11. Claims 1, 3, 10, 12, 15, 16, 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon.

Yoon discloses the device as described above with respect to claims 47 and 54 (numbered paragraph 7). It would appear that, due to the fact that each endoscope branch (14, 16 and 18, Fig.1) is individually and separately steered and individually rotatable about their respective longitudinal axes (col.4, lines 27-37), and the fact that no structure is disclosed that secures the branches in any particular manner to the shaft (12), that each endoscope branch would be capable of extension and retraction with respect to the shaft (12). However, Yoon fails to explicitly mention such capability. If not inherently contemplated by Yoon, it would have been obvious to one of ordinary skill in the art to have allowed the endoscope branches (14,16,18, Fig.1) to also be capable of moving in the direction of the longitudinal axis, and more advantageously, independently movable in that direction. This would provide an extra degree of freedom to the independently steerable and rotatable branches, thus making each branch easier to maneuver as desired.

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As to claims 3, 10, 12, 15, 16, 41 and 43, the limitations of these claims are addressed above in numbered paragraph 7.

Response to Arguments

12. Applicant's arguments filed July 17, 2008 have been fully considered but they are not persuasive.

Since the claim amendments render the rejections over Irion and Mitsui moot, no further issues exist. With respect to claim 1, the added limitation directed to the catheter being capable of "extension or retraction" is addressed above with respect to both Yoon and Kaiya.

Regarding claims 47 and 54, the Examiner takes the position that, when considering the shaft (12) and one of the imaging lenses as the claimed endoscope, the Yoon reference anticipates the claims. A modified rejection is set forth above.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Leubecker whose telephone number is (571) 272-4769. The examiner can normally be reached on Monday through Friday, 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Leubecker/
Primary Examiner
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jpl

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